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Scientific Note

A NEW AND UNUSUAL HOST RECORD FOR *HEMICOELUS GIBBICOLLIS* (LECONTE) (COLEOPTERA: ANOBIIDAE)

Hemicoelus gibbicollis (LeConte), referred to as the California deathwatch beetle (Linsley, E. G. 1943. Pests and Their Control, 11: 11–14, 23–26.; Ebeling W. 1975. Urban Entomology, pp. 128–216, Univ. Calif. Div. Agric. Sci., Los Angeles, California; Kramer R. D. 1997. Wood-Boring Beetles. In: Mallis, A. Handbook of Pest Control, Mallis Handbook and Training Company [8th ed.]. pp. 357–391.), is the most economically significant anobiid infesting structures along the Pacific Coast of North America (Suomi, D. A. & R. D. Akre. 1992. J. Econ. Entomol., 85: 1188–1193.). In nature, *H. gibbicollis* larvae feed on a wide range of softwoods and hardwoods (Knutson, L. V. 1963. Proc. Entomol. Soc. Wash., 65: 177–195; see attached Host List). In a recent survey of structures in the Pacific Northwest, Suomi and Akre (1992) (J. Entomol. Soc. Brit. Columbia, 89: 63–70.) found that the primary wood species infested by *H. gibbicollis* was Douglas-fir, *Pseudotsuga menziesii* (Mirbel) Franco, followed by western redcedar, *Thuja plicata* Donn ex D. Don, and western hemlock, *Tsuga heterophylla* (Rafinesque) Sargent. The high frequency of occurrence in *P. menziesii* probably reflects this wood's extensive use in home construction.

On 21 Nov. 1990, I inspected a home in San Francisco where the homeowner had reported a beetle infestation of the joists and subflooring. During my inspection I noticed that the basement was extremely damp with standing water in peripheral floor gutters. There were numerous emergence holes in the wooden substructure of the home with pelleted frass in the galleries. This type of damage in the San Francisco Bay Area is characteristic of colonization by *H. gibbicollis*. The homeowner explained that vernal springs occurred in this area of the city near the Presidio and this water contributed to the consistently high moisture in the basement area. As evidence of the high population density of the insect, the homeowner showed me the heavily infested wooden housing of an old television set that had been kept in the basement (wood species unknown). I also noticed a stand of bamboo that shaded the basement entry and further exacerbated the high moisture conditions in the basement. Examination of the bamboo culms (stalks) revealed many circular emergence holes, some of which contained dead anobiid adults. The culms contained numerous frass-packed galleries indicative of larval feeding and development. The fecal pellets were characteristic of *H. gibbicollis* and dead adults removed from the bamboo were identified as *H. gibbicollis*. Species-level identification of bamboo is not possible from the culms, but anatomical analysis of the infested bamboo revealed that it was a species in a leptomorphic (Type I) genus such as *Arundinaria, Phyllostachys, Fargesia, Sasa,* or *Pseudosasa,* all of which are temperate climate bamboos (Liese, W. L. 1995. European Bamboo Soc. Journal, May 6th, pp. 5–12).

Bamboo is frequently noted as a host for true powderpost beetles (Lyctidae) (because the bamboo has a large pore size required for oviposition or because it

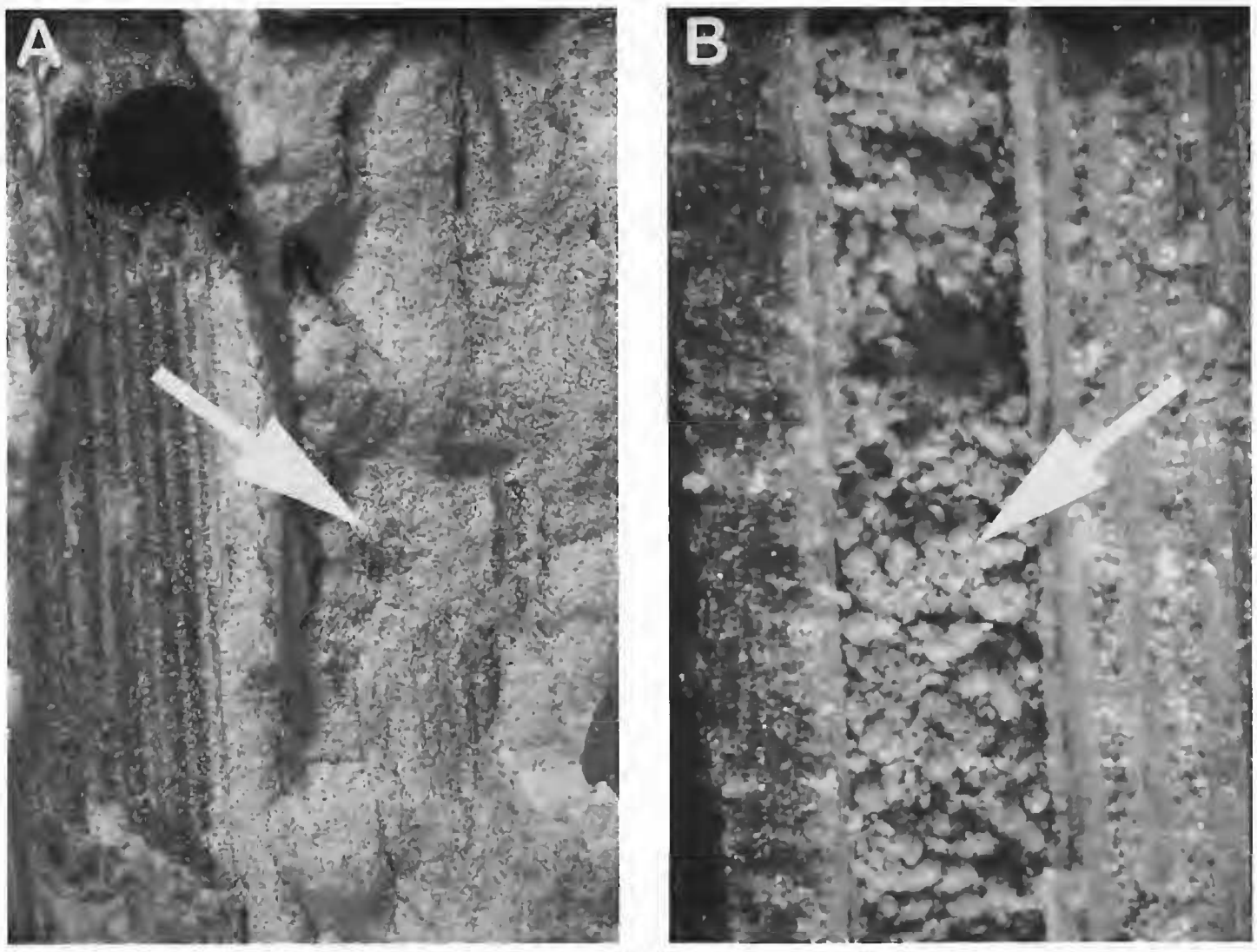

Figure 1. Feeding damage to bamboo by (A) Lyctidae and (B) *Hemicoelus gibbicollis* (Anobiidae). Arrows indicate the finely grained or flour-like frass produced by the lyctid and the pelleted frass produced by the anobiid.

has a high starch content) and for false powderpost beetles (Bostrichidae) (because of their abundance in the tropics where many bamboo products are derived) (Ebeling 1975, Kramer 1997). Compared with lyctid-infested bamboo, which has a finely grained or flour-like frass (Fig. 1A), *H. gibbicollis*-infested bamboo has galleries packed with pelleted frass (Fig. 1B). A review of the literature indicates that bamboo has never been reported before as a host for *H. gibbicollis.* It is likely, in this instance, that the population density of *H. gibbicollis* was so high in and around the structure that the beetles attacked this uncommon host. Additionally, *H. gibbicollis* is known to develop optimally when wood moisture content is between 14% and 17% (Suomi, D. A. & R. D. Akre. 1993. Pan-Pac. Entomol., 69: 221–235.), which may be typical for sub areas and basements in coastal northern California. Presumably, the high level of moisture in the wood in the basement and in wood in the surrounding area contributed to colonization of the bamboo as well.

Host List for Hemicoelus gibbicollis

Alder [*Alnus* spp.][4]
Red alder [*Alnus rubra* Bong.][7]
Blueblossom [*Ceanothus thyrsiflorus* Eschsh.][7]
Cherry [*Prunus* spp.][4]

Bitter cherry [*Prunus emarginata* (Dougl.) Walp.][3,6,7]
Wild prune [*Prunus subcordata* Benth.][1]
California hazel [*Corylus californica* (A. DC.) Sharp][7]
Douglas-fir [*Pseudotsuga menziesii* (Mirbel) Franco][2,4,7]
Fir [*Abies* spp.][4]
White fir [*Abies concolor* (Gordon & Glendinning) Hildebrand][7]
Grand fir [*Abies grandis* (Dougl. ex D. Don) Lindl.][7]
Hemlock, Western [*Tsuga heterophylla* (Raf.) Sarg.][4,7]
Maple [*Acer* spp.][1,4]
Bigleaf maple [*Acer macrophyllum* Pursh][3,6,7]
Oak [*Quercus* spp.][4]
Interior live oak [*Quercus wislizensii* A. DC.][7]
Redcedar, Western [*Thuja plicata* Donn ex D. Don][8]
Redwood [*Sequoia sempervirens* (D. Don) Endl.][4,6]
Spruce [*Picea* spp.][4,5]
Willow [*Salix* spp.][4]
Pacific or black willow [*Salix lasiandra* Benth.][7]
Yew, Pacific [*Taxus brevifolia* Nutt.][7]

Record.—USA. CALIFORNIA. SAN FRANCISCO CO.: ~2 km E. Mountain Lake (in Presidio), Baker Street, San Francisco, 21 Nov 1990, S. J. Seybold, *Bamboo.*

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